

# Fourth For Five

## 'Balanced life' sets stage for journey to Mir

By Kyle Herring

Astronaut Jerry Linenger has lived and trained in Russia nearly as long as he was at JSC prior to his first space shuttle mission. He now awaits the start of his second flight into space in the wee hours Sunday morning aboard *Atlantis* to dock with the Russian Mir Space Station. His unique preparation for the flight included midnight cross-country skiing by himself.

Awaiting his arrival is John Blaha who replaced Shannon Lucid in September. Linenger trained as Blaha's backup at the Gagarin Cosmonaut Training Center in Star City outside Moscow. He now is ready to take his place aboard Mir for the next five months as the fourth astronaut to live and work on the Russian space station and the first to conduct a space walk while a member of a Mir crew.

Once *Atlantis* docks with Mir, Linenger will become a member of the Mir 22 crew until the arrival of Commander Vasili Tsibliev, Flight Engineer Aleksandr Lazutkin and German Researcher Reinhold Ewald in early February. Ewald will depart with the Mir 22 crew leaving the remaining three cosmonauts to make up the Mir 23 crew.

A member of the astronaut class of 1992, Linenger has been in Russia training for his flight since May 1995. During that time, two new groups of astronauts came to work for NASA classes of 1995 and 1996.

While these two new groups of astronauts comprise nearly half of the entire astronaut corps, it is doubtful that many of them even knew who Linenger was when he returned from Russia for the final weeks of training last month. Yet, all likely will be the recipients of his wisdom on long duration stays in space since they will live and work aboard the International Space Station.

When Linenger went to Russia a year and a half ago, one of the first stops was the American Embassy in Moscow to get checked in and obtain credentials that he'd use for the duration of full-time training as the fourth astronaut to live and work aboard the Mir space station.

"I'd say I started off kind of feeling like a pioneer" when the only astronauts training in Russia were Lucid, Blaha and himself, he says. Though Astronaut Scott Parazynski arrived at the same time, he later returned home when it was decided that his size would prevent him from safely fitting in the Soyuz capsule used to return to Earth in the event of an emergency.

"In the beginning, it was kind of like Lewis and Clark going out west," Linenger says. That has changed more recently, he adds, as more astronauts and other co-workers have arrived to support missions and training.

In addition to the staff at Star City and the embassy, a small group of what amounts to flight controllers work out of the mission control center in Korolev, supporting the astronauts once they arrive at the space station.

"Now the settlers are starting to arrive," Linenger jokes. Astronaut Mike Lopez-Alegria, currently the NASA manager at Star City, oversees the training activities of U.S. astronauts Mike Foale, Wendy Lawrence,

Dave Wolf and Jim Voss.

Once he officially becomes a crew member of the space station, Linenger will be busy working mainly with existing experiments, with a flavor of life sciences investigations sprinkled throughout the work day. A physician and captain in the U.S. Navy Medical Corps, Linenger says he is looking forward to the life sciences work in space, but he has found the material science studies a welcome challenge.

"It's like going back to school again and learning some of the basic science behind it and then getting into the actual mechanics of how to carry out the experiment," he says. "It's been a challenge with a little education thrown in. A very steep learning curve is always fun to be on and it's hard to lose interest."

In addition to the science work while on board Mir, Linenger will join Tsibliev in a six-hour space walk scheduled for March to attach a large canister outside the Kristall module that will expose various materials to the space environment. They also will bring in some other experiments attached to the outside of the station. The training "has been extremely interesting," Linenger says, adding, "it's been the most enjoyable part of training so far."

Though he expects to adjust to life away from home, Linenger feels his Navy

experience will help as he prepares for this long duration space mission that will end in May on *Atlantis*' next visit bringing Mike Foale to replace him. "I'm used to being out at sea for six months and so psychologically, I think I pretty much know what's coming and it doesn't bother me much," he says.

The family separation will be the toughest, he says. The first six months of training in Russia was without family and when wife Kathryn and newborn son John arrived last January his life "improved 100 percent." Linenger says that "the family separation was difficult and I suspect the same will be the case during the space flight." Kathryn is expecting the family's second child shortly after Jerry's return on STS-84.

His unique approach in preparing for this flight included becoming happy with himself. "I've been trying to maintain a balanced life to make sure I can be happy with myself — alone."

He spent some evenings cross-country skiing in the woods at midnight, "becoming a bit lost, a bit cold and quite a bit tired," he says. "The physical stress, coping with uncertainty and getting close to the edge being alone with only yourself to draw on, trying to get conditioned," has prepared him for life in space.

"There's plenty of mental stress every day trying to understand difficult, complex systems presented in a foreign language," Linenger says. "I guess my approach is to make it my home. I'll put my family pictures up and I'll have my music. It'll be my work place and my living place combined in one, so with that attitude, I don't think I'll feel isolated and removed so much."

On Sunday, Jerry Linenger will begin a five-month Lewis and Clark expedition and cross-country skiing trip all wrapped up into one on a sailing vessel called Mir. □



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—Jerry Linenger about the isolation of space



From top to bottom, left to right: 1) Astronaut Jerry Linenger discusses Mir systems with a flight instructor at the Gagarin Cosmonaut Training Center in Star City, Russia; 2) Linenger, center, attends training sessions with, from left, Mir 24 Flight Engineer Aleksandr Kaleri and Commander Valeri Korzun.; 3) From left, Linenger, Kaleri and Korzun check out cameras that will be used on board Mir during training sessions in Russia; 4) The Mir 23 crew that includes Flight Engineer Aleksandr Lazutkin, left, and Commander Vasili Tsibliev, right, trained with Astronaut Jon Blaha, center, before his trip to the Russian outpost. In early February, Linenger will become a part of the Mir 23 crew when they arrive at the Russian Mir Space